CONDITIONAL STATEMENTS

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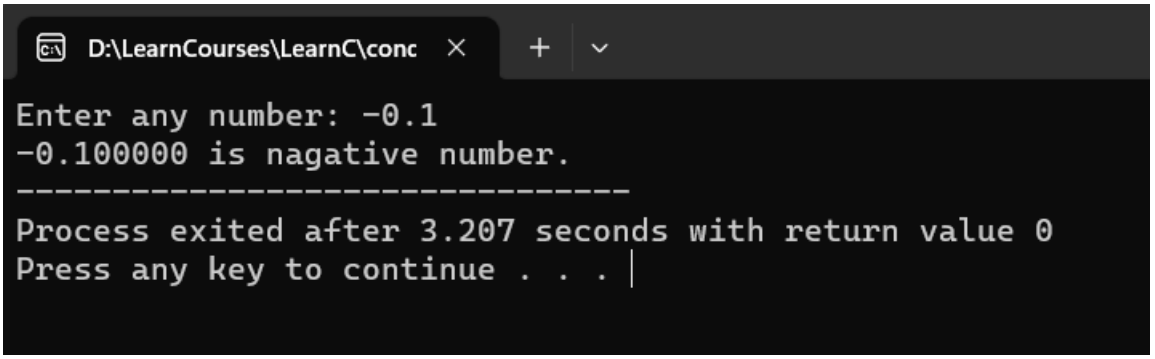
1. **Write a C program to find number is positive, negative or zero.**

❖ Code

```
#include<stdio.h>
int main() {
	float num;
	printf("Enter any number: ");
	scanf("%f", &num);
	if (num > 0) {
		printf("%f is positive number.", num);
	} else if (num < 0) {
		printf("%f is nagative number.", num);
	} else {
		printf("%f isn't either positive or nagative number.", num);
	}
	return 0;
}
```

❖ Output



2. **Write a C program to find Grade from percentage. Here range is given below:**

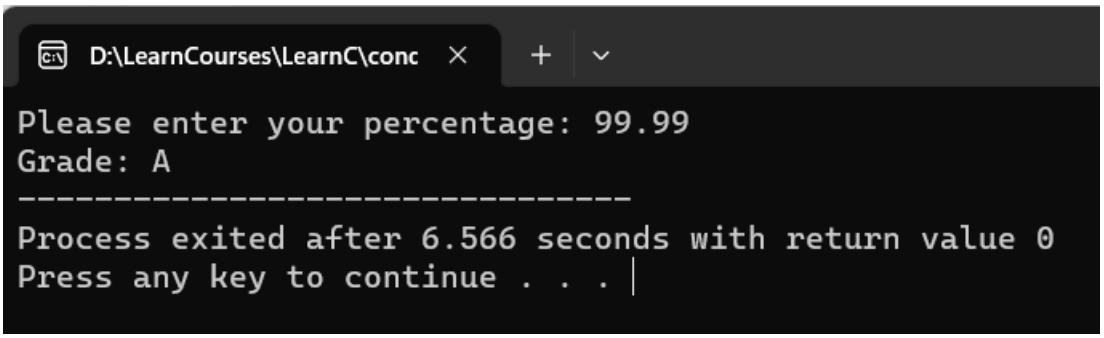
- **91 - 100 A**
- **81 - <91 B**
- **71 - <81 C**
- **61 - <71 D**
- **40 - <61 E**
- **<40 Failed**

❖ Code

```
#include<stdio.h>
int main() {
	float per;
	printf("Please enter your percentage: ");
	scanf("%f", &per);
	if (per >= 91 && per <= 100) {
		printf("Grade: A");
	} else if (per >= 81 && per < 91){
		printf("Grade: B");
	} else if (per >= 71 && per < 81){
		printf("Grade: C");
	} else if (per >= 61 && per < 71){
		printf("Grade: D");
	} else if (per >= 40 && per < 61){
		printf("Grade: E");
```

```
        } else if (per >= 0 && per < 40){
                printf("Sorry, you are feild in exam.");
        } else {
                printf("INVALID - please check your entered input.");
        }
        return 0;
}
```

❖ Output



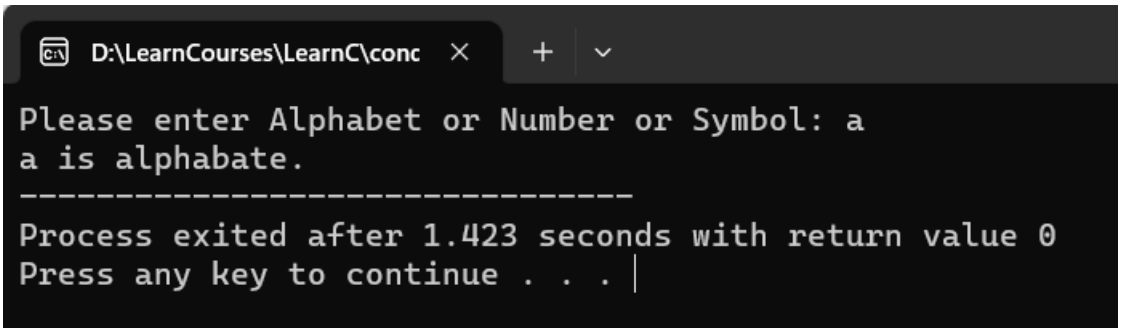
3. **Write a C program to find Code is alphabet, number or special symbols.**

❖ Code

```
#include<stdio.h>
int main() {
	char x;
	printf("Please enter Alphabet or Number or Symbol: ");
	scanf("%c", &x);
	if ((x >= 'a' && x <='z' ) || (x >='A' && x <='Z') ){
		printf("%c is alphabate.", x);
	} else if (x >= '0' && x <= '9') {
		printf("%c is numbers.", x);
	} else {
		printf("%c isSpecial symbol.", x);
	}
	return 0;
```

```
}
```

❖ Output



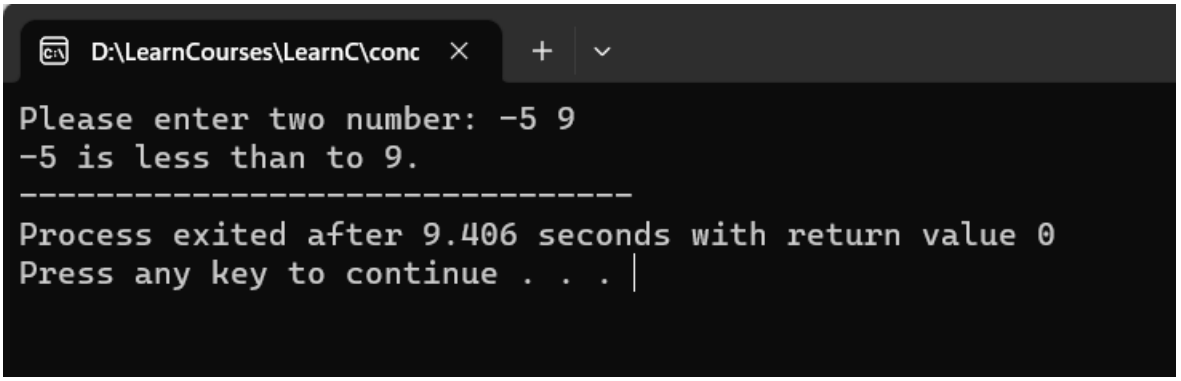
4. Write a C program to compare two number.

❖ Code

```
#include<stdio.h>
int main() {
        int n1, n2;
        printf("Please enter two number: ");
        scanf("%d %d", &n1, &n2);
        if (n1 < n2) {
                printf("%d is less than to %d.", n1, n2);
        } else if (n1 > n2) {
                printf("%d is more than to %d.", n1, n2);
        } else {
                printf("%d is equal to %d", n1, n2);
```

```
    }
    return 0;
}
```

❖ Output



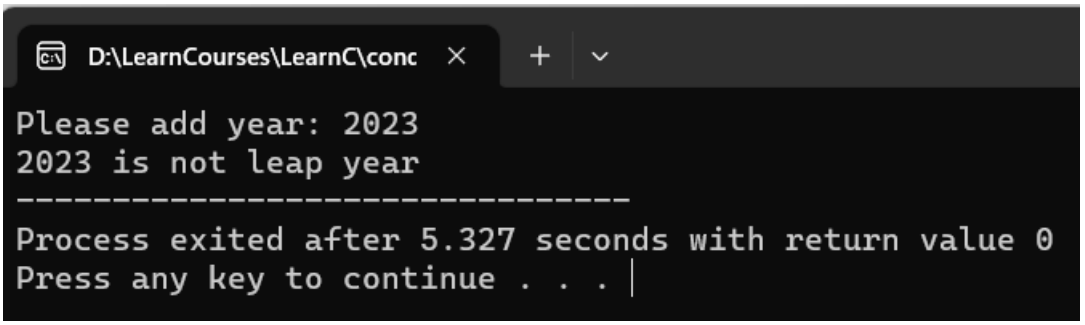
5. Write a C program to find leap year.

❖ Code

```
#include<stdio.h>
int main() {
    int yr;
    printf("Please add year: ");
    scanf("%d", &yr);
    if (yr < 0) {
        printf("INVALID - entered year should be more then or equal to 0.");
    } else if (yr % 400 == 0) {
        printf("%d is leap year.", yr);
```

```
    } else if  (yr % 100 == 0) {
        printf("%d is not leap year.", yr);
    } else if (yr % 4 == 0) {
        printf("%d is leap year.", yr);
    } else {
        printf("%d is not leap year", yr);
    }
    return 0;
};
```

❖ Output



6. Write a C program to Code electricity unit charges and calculate total electricity bill according to the given condition:

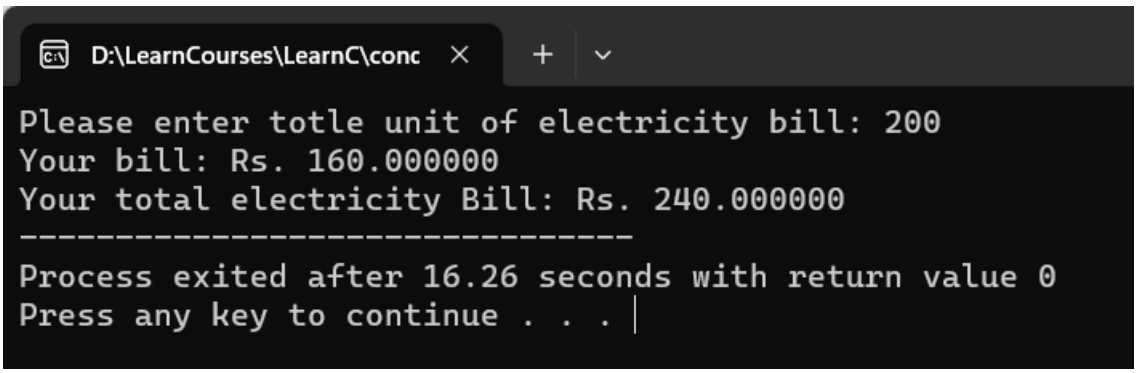
For first 50 units Rs. 0.50/unit
For next 100 units Rs. 0.75/unit
For next 100 units Rs. 1.20/unit
For unit above 250 Rs. 1.50/unit
An additional surcharge of 20% is added to the bill.

❖ Code

```
#include<stdio.h>
int main() {
    float unit, bill, totle_bill;
```

```
        printf("Please enter totle unit of electricity bill: ");
        scanf("%f", &unit);
        if (unit >= 0) {
                if (unit >= 0 && unit <= 50) {
                        bill = unit * 0.5;
                } else if (unit > 50 && unit <= 150) {
                        bill = 50 * 0.5 + (unit - 50) * 0.75;
                } else if (unit > 150 && unit <=250) {
                        bill = 50 * 0.5 + 100 * 0.75 + (unit - 150) * 1.2;
                } else if (unit > 250) {
                        bill = 50 * 0.5 + 100 * 0.75 + 100 * 1.2 + (unit - 250) * 1.5;
                }
                totle_bill = unit + (unit * 0.2);
                printf("Your bill: Rs. %f\n", bill);
                printf("Your total electricity Bill: Rs. %f", totle_bill);
        } else {
                printf("INVALIDE - Added unit should be more than or equal to
0.");
        }
        return 0;
};
}
```

❖ Output



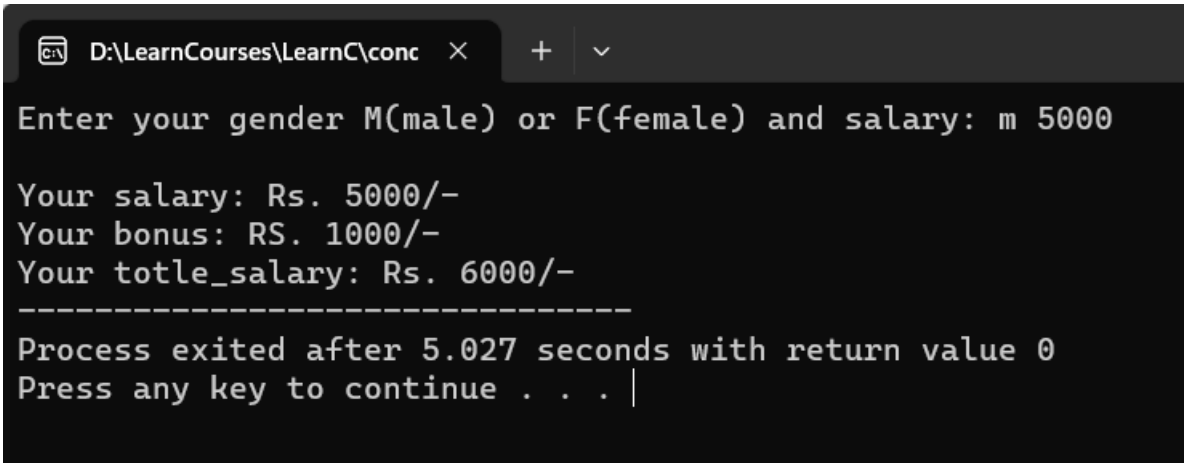
7. **Write a C program that ask your gender and salary and give bonus according to following criteria:**

   - If you are male and your salary is less than 10000 than company will provide 2% bonus of your salary
   - If you are female and your salary is less than 10000 than company will provide 3% bonus of your salary

❖ **Code**

```
#include<stdio.h>
int main() {
	char gender;
	int salary, bonus, totle_salary;
	printf("Enter your gender M(male) or F(female) and salary: ");
	scanf("%c %d", &gender, &salary);
	if ((gender == 'm' || gender == 'M') && salary < 10000) {
		bonus = salary * 0.2;
	} else if ((gender == 'f' || gender == 'F') && salary < 10000) {
		bonus = salary * 0.3;
	}
	totle_salary = salary + bonus;
	if (salary < 10000 && salary > 0) {
		printf("\nYour salary: Rs. %d/-\n", salary);
		printf("Your bonus: RS. %d/-\n", bonus);
		printf("Your totle_salary: Rs. %d/-", totle_salary);
	} else if (salary < 0) {
		printf("\nINVALID - Your salary should be more than or
	equal to 0.");
	} else {
		printf("\nSorry, Rs. %d is more than Rs.10000 so you can
	not get bonus.", salary);
	}
return 0;
}
```

❖ **Output**


D:\LearnCourses\LearnC\conc
Enter your gender M(male) or F(female) and salary: m 5000
Your salary: Rs. 5000/-
Your bonus: RS. 1000/-
Your totle_salary: Rs. 6000/-

Process exited after 5.027 seconds with return value 0
Press any key to continue . . .

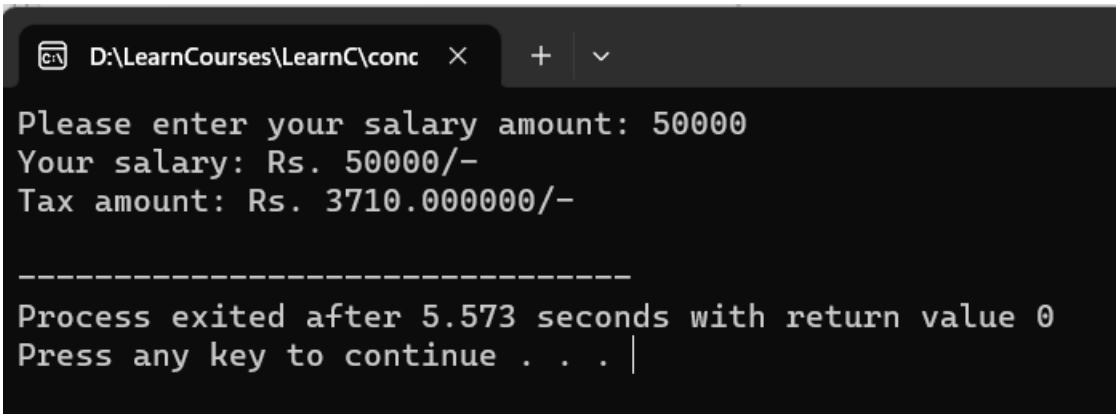
8. **Write a C program to calculate tax from given image.**

❖ Code

```
#include<stdio.h>
int main() {
	int salary;
	float tax_amt;
	printf("Please enter your salary amount: ");
	scanf("%d", &salary);
	if (salary >= 0) {
		if (salary > 2000 && salary <= 4000) {
			tax_amt = 2000 * 0 + (salary - 2000) * 0.03;
		} else if (salary > 4000 && salary <= 5000) {
			tax_amt = 2000 * 0 + 2000 * 0.03 + (salary - 4000) * 0.05;
		} else if (salary > 5000) {
			tax_amt = 2000 * 0 + 2000 * 0.03 + 1000 * 0.05 + (salary -
5000) * 0.08;
		}
		if (salary > 2000) {
			printf("Your salary: Rs. %d/-\n", salary);
			printf("Tax amount: Rs. %f/-\n", tax_amt);
		} else {
			printf("No tax deducation.");
		}
	} else {
		printf("INVALID - Please check your input.\n");
```

```
        }
        return 0;
}
        return 0;
}
```

❖ Output



9. **Write a C program for calculate scholarship from given criteria:**

Cast Criteria:

- **Open: No Scholarship**
- **OBC: 25%**
- **SC: 50%**
- **ST: 100%**

Grade Criteria:

- **Your grade must be same or above B to eligible for scholarship.**

Grade:

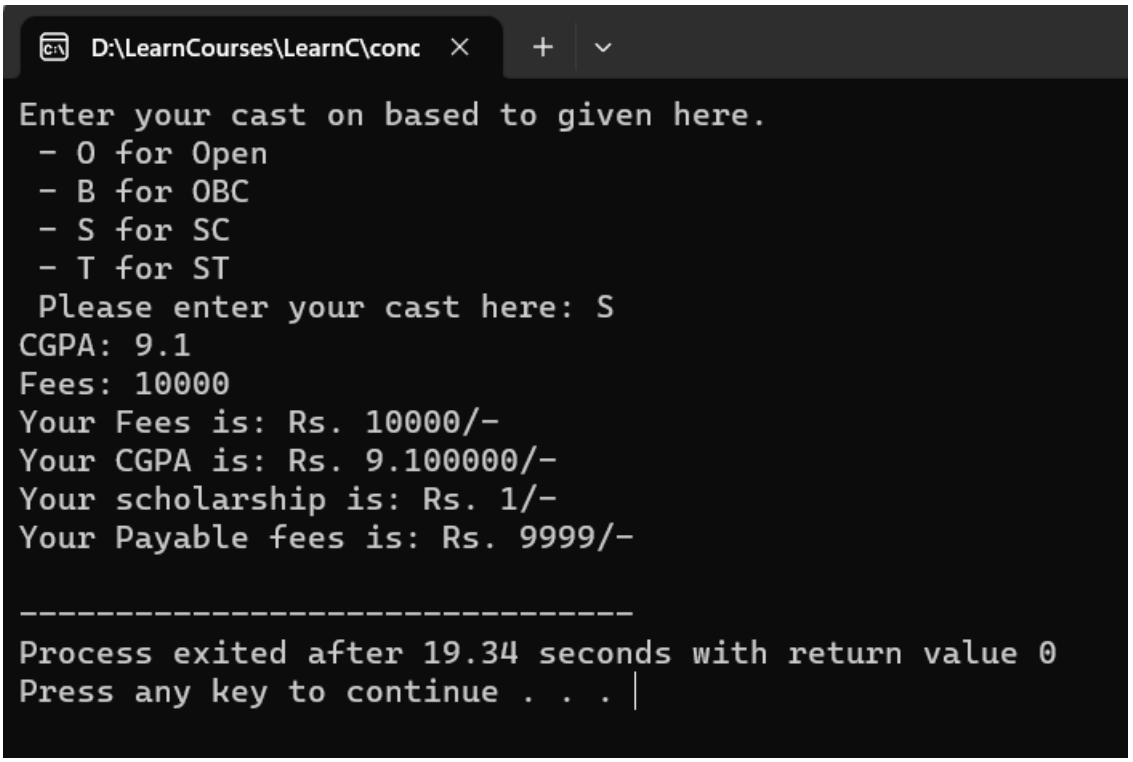
- **A (CGPA: 9+)**
- **B (CGPA: 8.5+)**
- **C (CGPA: 8+)**
- **D (CGPA: 7.5+)**

❖ Code

```
#include<stdio.h>

int main() {

        char cast, grade;

        int fees, scholarship, totle_fees;

        float cgpa;

        printf("Enter your cast on based to given here.\n - O for Open\n - B for
OBC\n - S for SC\n - T for ST\n Please enter your cast here: ");

        scanf("%s", &cast);

        printf("CGPA: ");

        scanf("%f", &cgpa);

        printf("Fees: ");
```

```
	scanf("%d", &fees);
	if (cgpa > 9 && cgpa <= 10) {
		grade = 'A';
	} else if (cgpa > 8.5 && cgpa <= 9) {
		grade = 'B';
	} else if (cgpa > 8 && cgpa <= 8.5) {
		grade = 'C';
	} else if (cgpa > 7.5 && cgpa <= 8) {
		grade = 'D';
	}
	if (cast == 'O') {
		printf("Sorry, Your cast is %c (Open) so you can not get
Scholarship.", cast);
	} else if (cast == 'B' && grade >= 'B') {
		scholarship = fees * 0.25;
	} else if (cast == 'S' && grade >= 'B') {
		scholarship = fees * 0.50;
	} else if (cast == 'T' && grade >= 'B') {
		scholarship = fees * 1;
	}
	totle_fees = fees - scholarship;
	printf("Your Fees is: Rs. %d/-\n", fees);
	printf("Your CGPA is: Rs. %f/-\n", cgpa);
	printf("Your scholarship is: Rs. %d/-\n", scholarship);
	printf("Your Payable fees is: Rs. %d/-\n", totle_fees);
	return 0;
}
```

❖ Output


D:\LearnCourses\LearnC\conc
Enter your cast on based to given here.
- O for Open
- B for OBC
- S for SC
- T for ST
Please enter your cast here: S
CGPA: 9.1
Fees: 10000
Your Fees is: Rs. 10000/-
Your CGPA is: Rs. 9.100000/-
Your scholarship is: Rs. 1/-
Your Payable fees is: Rs. 9999/-

Process exited after 19.34 seconds with return value 0
Press any key to continue . . .

10. Write a C program for calculate your net income from given criteria:

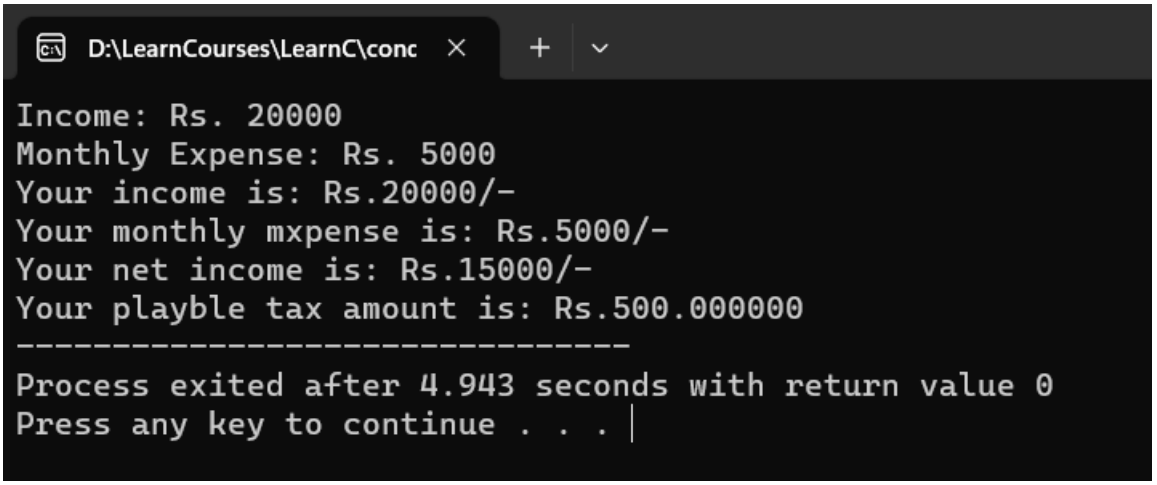
- **If your net income is below 10000 you have not to pay any tax.**
- **If your net income is below 15000 you have to pay 10% tax.**
- **If your net income is above 15000 you have to pay 18% tax.**

❖ Code

```
#include<stdio.h>
int main() {
	int income, mon_exp, net_income;
	float tax;
	printf("Income: Rs. ");
	scanf("%d", &income);
	printf("Monthly Expense: Rs. ");
	scanf("%d", &mon_exp);
	net_income = income - mon_exp;
	if (net_income <= 10000) {
		printf("You have not to pay any tax because your net
incom is Rs. %d/-", net_income);
	} else if ((net_income <= 15000) && (net_income >
10000)) {
		tax = (net_income - 10000) * 0.1;
	} else if (net_income > 15000) {
		tax = 10000 * 0 + 5000 * 0.1 + (net_income - 15000)
* 0.18;
	}
	if (net_income > 10000) {
		printf("Your income is: Rs.%d/-\n", income);
```

```
            printf("Your monthly mxpense is: Rs.%d/-\n",
mon_exp);
            printf("Your net income is: Rs.%d/-\n", net_income);
            printf("Your playble tax amount is: Rs.%f", tax);
        }
return 0;
}
```

❖ **Output**



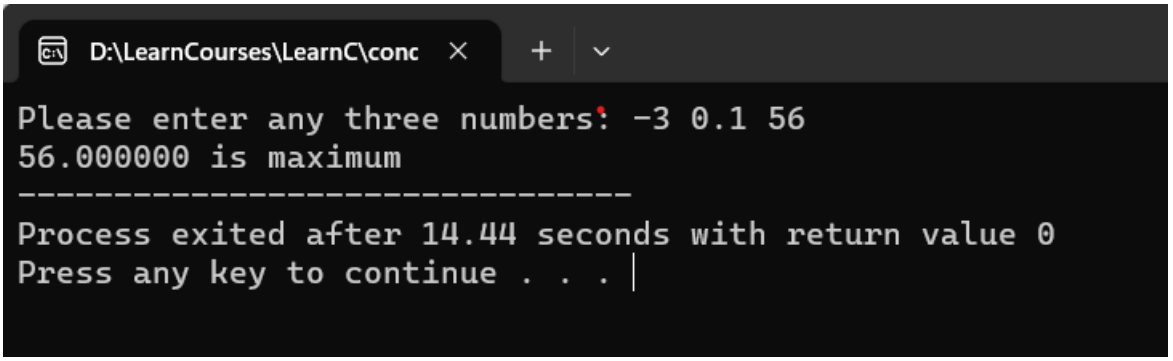
11. Write a C program to find out maximum from 3 numbers using nested if.

❖ Code

```
#include<stdio.h>
int main () {
	float n1, n2, n3;
	printf("Please enter any three numbers: ");
	scanf("%f %f %f", &n1, &n2, &n3);
	if (n1 > n2) {
		if (n1 > n3) {
			printf("%f is maximum", n1);
		} else {
			printf("%f is maximum", n3);
		}
	} else {
		if (n2 > n3) {
			printf("%f is maximum", n2);
		} else {
			printf("%f is maximum", n3);
		}
	}
```

```
        return 0;
    }
```

❖ **Output**



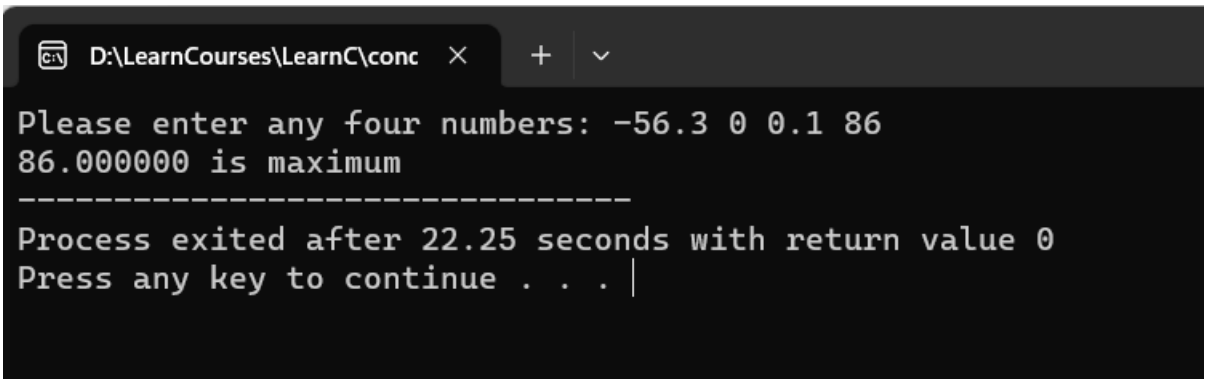
12. Write a C program to find out maximum from 4 numbers using nested if.

❖ **Code**

```
#include<stdio.h>
int main () {
    float n1, n2, n3, n4;
    printf("Please enter any four numbers: ");
    scanf("%f %f %f %f", &n1, &n2, &n3, &n4);
    if (n1 > n2) {
        if (n1 > n3) {
            if(n1 > n4) {
                printf("%f is maximum", n1);
            } else {
                printf("%f is maximum", n4);
            }
        } else {
            if(n3 > n4) {
                printf("%f is maximum", n3);
```

```
                } else {
                        printf("%f is maximum", n4);
                }
        }
    } else {
        if (n2 > n3) {
                if (n2 > n4) {
                        printf("%f is maximum", n2);
                } else {
                        printf("%f is maximum", n4);
                }
        } else {
                if(n3 > n4) {
                        printf("%f is maximum", n3);
                } else {
                        printf("%f is maximum", n4);
                }
        }
    }
    return 0;
}
```

❖ **Output**



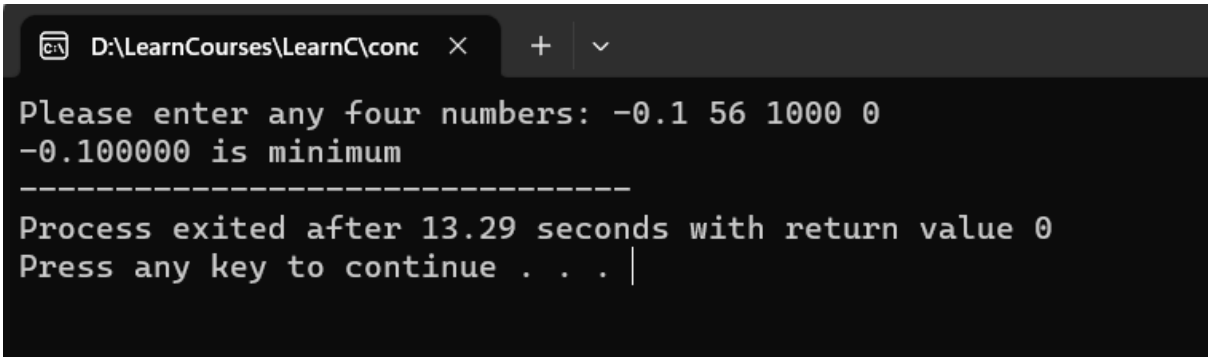
13. Write a C program to find out minimum from 4 numbers using nested if.

❖ Code

```
#include<stdio.h>
int main () {
	float n1, n2, n3, n4;
	printf("Please enter any four numbers: ");
	scanf("%f %f %f %f", &n1, &n2, &n3, &n4);
	if (n1 < n2) {
		if (n1 < n3) {
			if(n1 < n4) {
				printf("%f is minimum ", n1);
```

```
                } else {
                        printf("%f is minimum ", n4);
                }
        } else {
                if(n3 < n4) {
                        printf("%f is maximum", n3);
                } else {
                        printf("%f is maximum", n4);
                }
        }
} else {
        if (n2 < n3) {
                if (n2 < n4) {
                        printf("%f is minimum ", n2);
                } else {
                        printf("%f is minimum ", n4);
                }
        } else {
                if(n3 < n4) {
                        printf("%f is minimum ", n3);
                } else {
                        printf("%f is minimum ", n4);
                }
        }
}
        return 0;
}
```

❖ **Output**



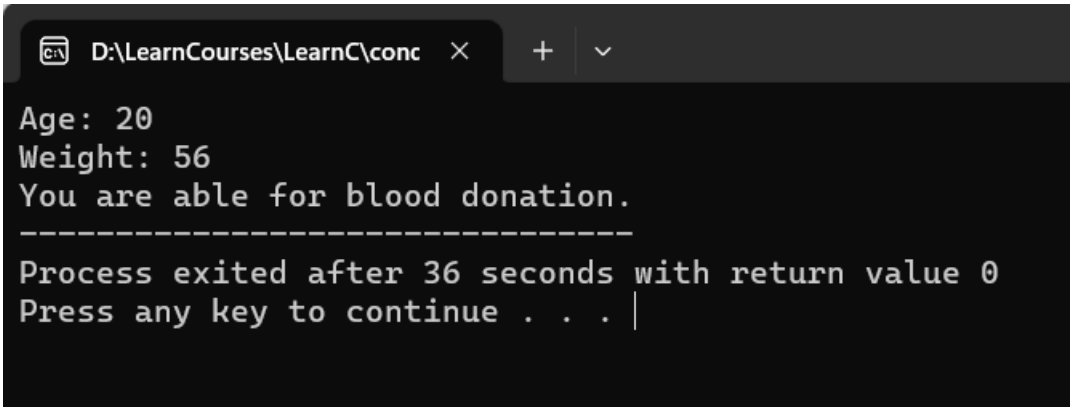
14. Write a C program to find user is eligible for blood donation or not using nested if.

❖ Code

```
#include<stdio.h>
```

```
int main () {
	int age, weight;
	printf("Age: ");
	scanf("%d", &age);
	if (age >= 18) {
		printf("Weight: ");
		scanf("%d", &weight);
		if (weight >= 50) {
			printf("You are able for blood donation.");
		} else {
			printf("Sorry, You are not able for blood donation beacuse your weight: %dKg is under to 50KG.",age, weight);
		}
	} else {
		printf("Sorry, You are not able for blood donation beacuse your age: %d years is under to 18 years.", age);
	}
	return 0;
}
```

❖ **Output**


D:\LearnCourses\LearnC\conc
Age: 20
Weight: 56
You are able for blood donation.

Process exited after 36 seconds with return value 0
Press any key to continue . . .

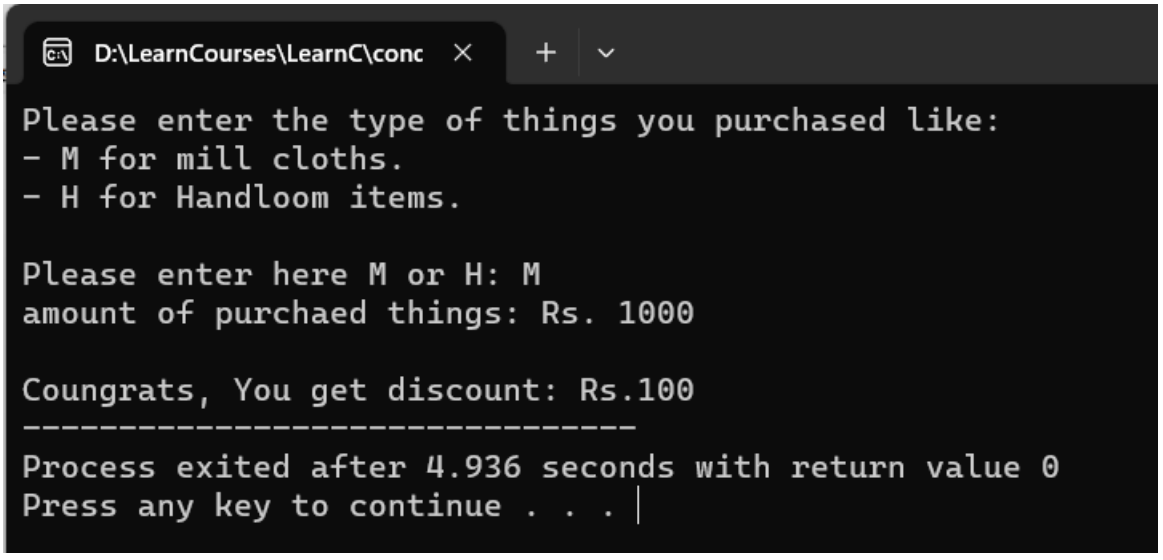
15. Write a C program to calculate sales discount from given image using nested if or (switch case and if condition).

❖ code

```
#include<stdio.h>
int main () {
	char things;
	int purchase_amt, discount;
	printf("Please enter the type of things you purchased like: \n- M for mill cloths.\n- H for Handloom items.\n\nPlease enter here M or H: ");
	scanf("%c", &things);
	printf("amount of purchaed things: Rs. ");
	scanf("%d", &purchase_amt);
	if ((things == 'M' || things == 'm') && purchase_amt > 0 ) {
		if (purchase_amt > 0 && purchase_amt <= 100) {
			printf("Sorry, You can not get any discount.");
		} else if (purchase_amt > 100 && purchase_amt <= 200) {
			discount = purchase_amt * 0.05;
		} else if (purchase_amt > 200 && purchase_amt <= 300) {
			discount = purchase_amt * 0.075;
		} else if (purchase_amt > 300) {
			discount = purchase_amt * 0.1;
		}
		printf("\nCoungrats, You get discount: Rs.%d", discount);
	} else if ((things == 'H' || things == 'h') && purchase_amt > 0 ) {
		if (purchase_amt > 0 && purchase_amt <= 100) {
			discount = purchase_amt * 0.05;
```

```
        } else if (purchase_amt > 100 && purchase_amt <= 200) {
                discount = purchase_amt * 0.075;
        } else if (purchase_amt > 200 && purchase_amt <= 300) {
                discount = purchase_amt * 0.1;
        } else if (purchase_amt > 300) {
                discount = purchase_amt * 0.15;
        }
        printf("\nCoungrats, You get discount: Rs.%d/-", discount);
    } else {
        printf("INVALID - Please check your added input");
    }
    return 0;
}
```

❖ Output



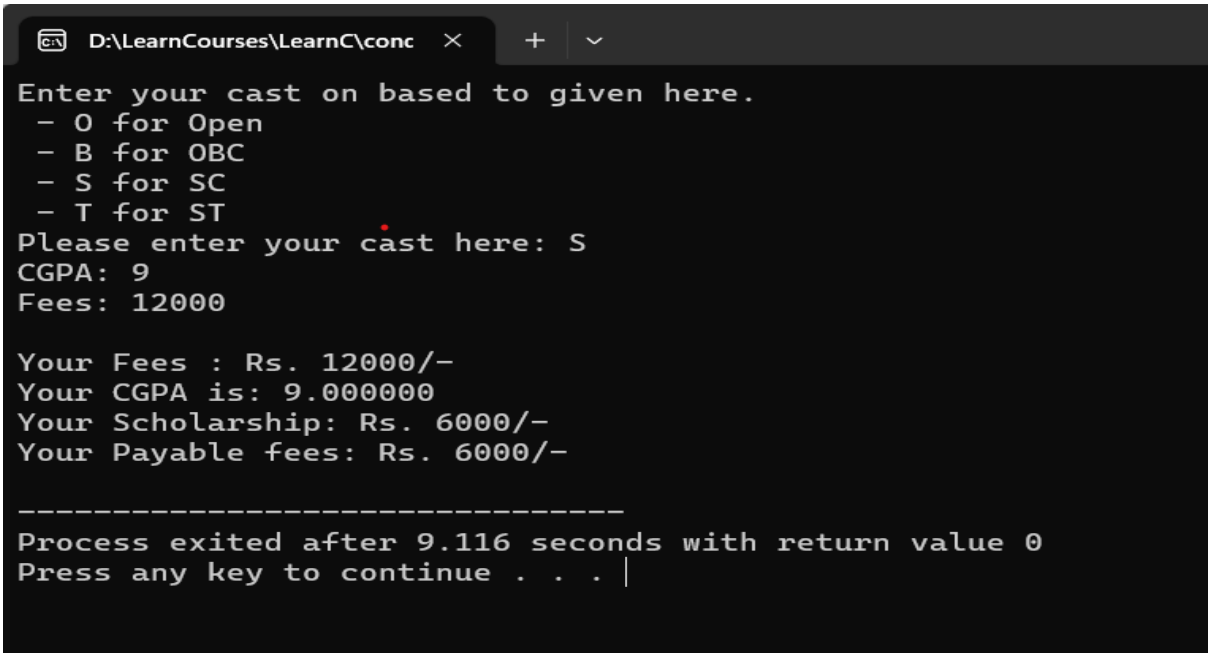
16.Reform 9th program using nested if.

❖ **Code**

```
#include<stdio.h>
int main() {
	char cast, grade;
	int fees, scholarship, totle_fees;
	float cgpa;
	printf("Enter your cast on based to given here.\n - O for Open\n - B for OBC\n - S for SC\n - T for ST\nPlease enter your cast here: ");
	scanf("%s", &cast);
	if (cast == 'O') {
		printf("Sorry, Your cast is %c (Open) so you can not get Scholarship.", cast);
	} else if (cast == 'B' || cast == 'S' || cast == 'T') {
		printf("CGPA: ");
		scanf("%f", &cgpa);
		if (cgpa > 9 && cgpa <= 10) {
			grade = 'A';
		} else if (cgpa > 8.5 && cgpa <= 9) {
			grade = 'B';
		} else if (cgpa > 8 && cgpa <= 8.5) {
			grade = 'C';
		} else if (cgpa > 7.5 && cgpa <= 8) {
			grade = 'D';
		}
```

```
            if (grade >= 'B') {
                printf("Fees: ");
                scanf("%d", &fees);

                if (cast == 'B') {
                    scholarship = fees * 0.25;
                } else if (cast == 'S') {
                    scholarship = fees * 0.50;
                } else if (cast == 'T') {
                    scholarship = fees * 1;
                }
                totle_fees = fees - scholarship;
                printf("\nYour Fees : Rs. %d/-\n", fees);
                printf("Your CGPA is: %f\n", cgpa);
                printf("Your Scholarship: Rs. %d/-\n",
scholarship);
                printf("Your Payable fees: Rs. %d/-\n",
totle_fees);
            } else {
                printf("Sorry, Your CGPA should more than 8.5+
and less than or euqal to 10.");
            }
        } else {
            printf("INVALID - Please check your added input.");
        }
        return 0;
}
```

❖ **Output**



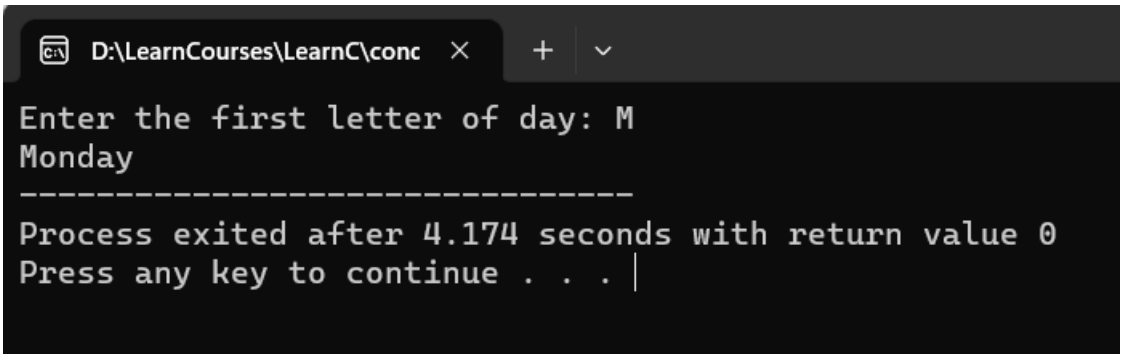
17. Write a C program to find day name using switch case.

❖ Code

```
#include<stdio.h>
int main () {
        char day;
        printf("Enter the first letter of day: ");
        scanf("%c", &day);
        switch (day) {
                case 'M':
                        printf("Monday");
                        break;
                case 'T':
                        printf("Tuseday");
                        break;
                case 'W':
                        printf("Wendsday");
                        break;
                case 't':
                        printf("Thursday");
                        break;
                case 'F':
                        printf("Friday");
```

```
                break;
        case 'S':
                printf("Saterday");
                break;
        case 's':
                printf("Sunday");
                break;
        default:
                printf("\nINVALID - Please check your added input.");
                break;
    }
        return 0;
}
```

❖ Output



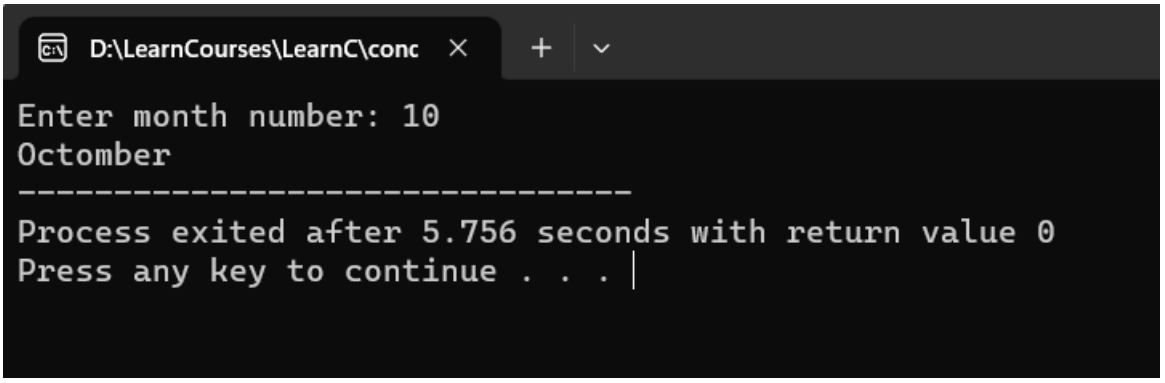
18. Write a C program to find month name from month number using switch case.

❖ Code

```
#include<stdio.h>
int main () {
        int month;
        printf("Enter month number: ");
        scanf("%d", &month);
        switch (month) {
                case 1:
                        printf("January");
                        break;
                case 2:
                        printf("February");
```

```
                break;
        case 3:
                printf("March");
                break;
        case 4:
                printf("April");
                break;
        case 5:
                printf("May");
                break;
        case 6:
                printf("June");
                break;
        case 7:
                printf("July");
                break;
        case 8:
                printf("August");
                break;
        case 9:
                printf("September");
                break;
        case 10:
                printf("Octomber");
                break;
        case 11:
                printf("November");
                break;
        case 12:
                printf("December");
                break;
        default:
                printf("INVALID - Please check your added input.");
                break;
    }
        return 0;
}
```

❖ Output



19.Reform 7th program using switch case and if condition.

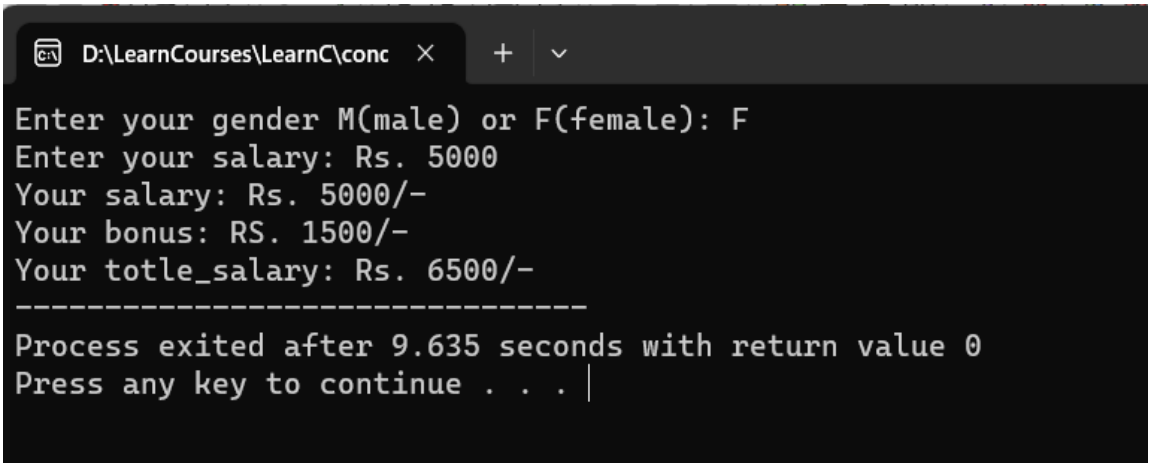
❖ Code

```
#include<stdio.h>
int main() {
        char gender;
        int salary, bonus, totle_salary;
```

```
	printf("Enter your gender M(male) or F(female): ");
	scanf("%c", &gender);
	switch (gender) {
		case 'M':
			printf("Enter your salary: Rs. ");
			scanf("%d", &salary);
			if (salary < 10000 && salary > 0) {
				bonus = salary * 0.2;
				totle_salary = salary + bonus;
				printf("Your salary: Rs. %d/-\n", salary);
				printf("Your bonus: RS. %d/-\n", bonus);
				printf("Your totle_salary: Rs. %d/-",
totle_salary);
			} else {
				printf("\nSorry, You can not get bonus because
your salary should more than Rs.0/- otherwise less than Rs.10000/-.");
			}
			break;
		case 'F':
			printf("Enter your salary: Rs. ");
			scanf("%d", &salary);
			if (salary < 10000 && salary > 0) {
				bonus = salary * 0.3;
				totle_salary = salary + bonus;
				printf("Your salary: Rs. %d/-\n", salary);
				printf("Your bonus: RS. %d/-\n", bonus);
				printf("Your totle_salary: Rs. %d/-",
totle_salary);
			} else {
				printf("\nSorry, You can not get bonus because
your salary should more than Rs.0/- otherwise less than Rs.10000/-.");
			}
			break;
		default:
			printf("\nINVALID - Please check your added input.");
			break;
	}
```

```
    return 0;
}
```

❖ **Output**



20. Write a program to check whether a given number is divisible by 5 or not.

❖ **Code**

```c
#include<stdio.h>
int main() {
	int num;
	float ans;
	printf("Please Enter any number: ");
	scanf("%d", &num);
	if (num % 5 == 0) {
		printf("%d number is divisible by 5.", num);
	} else {
		printf("%d number is not divisible by 5.", num);
	}
	return 0;
}
```

❖ Output